- Evans, H. E. 1966. The Comparative Ethology and Evolution of the Sand Wasps. Cambridge: Harvard University Press.
- Lin, N. 1963. Territorial behavior in the cicada killer wasp *Sphecius speciosus* (Drury) (Hymenoptera: Sphecidae). Behaviour 20: 115-133.
 - —. 1966. Weather and the natural regulation of three populations of the cicada killer wasp,

Sphecius speciosus. Amer. Zool. 6(3): abstract 208.

- Riley, C. V. 1893. The larger digger wasp. Insect Life 4: 248-252.
- White, M. J. D. 1954. Animal Cytology and Evolution. Cambridge University Press, pp. 326–338.
- Lin, N., and C. D. Michener. 1972. Evolution of sociality in insects. Quart. Rev. Biol. 47(2): 131-159.

Colaspis quattuordecimcostata Lefèvre and Its Close Relatives in Brazil

Doris H. Blake

Research Associate, U. S. National Museum of Natural History, Smithsonian Institution, Washington, D. C.

ABSTRACT

Colaspis quattuordecimcostata Lefèvre is redescribed from the type specimen, and nine additional Brazilian species of Colaspis are described and figured.

In my studies of the Chrysomelidae I have had difficulty in establishing the true identity of the species from Brazil described by Lefèvre in 1887 as *Colaspis quattuordecimcostata*. My study of Lefèvre's type was made possible by Nicole Berti, who sent the holotype from the Natural History Museum in Paris for my examination. There are 9 closely related new species of *Colaspis*, all from Brazil, which I am describing in this paper.

Colaspis quattuordecimcostata Lefèvre (Fig. 1)

Colaspis 14-costata Lefèvre, 1887. Ann. Soc. Ent. France, 1887, p. 144-45.

Length 11 mm. Width 4.3 mm.

Oblong oval, shining black with mostly black antennae.

Head black with fine punctures, interocular space half width of head, a medium depression down front, labrum dark brown, antennae with only joints 2 and 3 pale. Prothorax twice as broad as long, margin with tooth below middle, disc with moderately dense punctures. Scutellum shining black. Elytra a little more than 3 times as long as prothorax and wider, punctures in geminate rows except near suture where in single row and near the apex of second row, with well marked costae. Body beneath with blue-green lustre. Legs black, hind tibiae short and almost the same length as other tibiae.

Holotype.—Female, Natural History Museum, Paris (from which I borrowed the type specimen and made a drawing).

Type-locality.—Brazil.

Remarks.—The most striking character in this species is the very short hind tibiae.

Colaspis paracostata, n. sp.

(Fig. 2)

Length 8 mm. Width 4 mm.

Elongate oblong oval, shining black with dark blue-black head and prothorax.

Head with dense fine punctures, labrum brown. Interocular space a little more than half width of head, antennae with only third joint pale. Prothorax approximately twice as wide as long, margin with tooth below middle, disc sparsely punctate. Elytra more than 3 times as long as prothorax and wider. Elytra with geminate punctures except near suture and at apex of next row with costae between rows. Body beneath shining blue-black. Prosternum with few punctures. Legs all black.

Holotype—Female, USNM Type No. 75744.

Type-locality. — Brazil.

Remarks.—This species so closely resembles *C. quattuordecimcostata* that I am naming it *C. paracostata* n. sp. It differs in having longer hind tibiae.

> Colaspis braxatibiae, n. sp. (Fig. 3)

Length 8 mm. Width 4 mm.

Very elongate oblong oval, black all over, antennae black.

Head densely punctate with a depression down front, interocular space half width of head, antennae all black. Prothorax with margin having tooth below middle, disc with dense punctures, prothorax not twice as wide as long. Scutellum black. Elytra more than 3 times as long as prothorax and wider, so densely punctate that arrangement of punctures is not clear, but with tendency to be geminate, costae fairly well marked. Hind tibiae short. Prosternum with punctures.

Holotype.—Female, USNM Type No. 75745.

Type-locality.—Curraliahe, Minas Gerais, Brazil.

Remarks.—This species has unusually long elytra and short hind tibiae.

Colaspis corumbensis, n. sp.

(Fig. 4)

Length 8 mm. Width 4 mm.

Elongate oblong oval, black with green lustre. Antennae with four basal joints pale.

Head small, interocular space less than half width of head, head rather sparsely punctate, antennae with seven apical joints dark. Prothorax approximately twice as wide as long, margin with tooth below middle, disc densely punctate. Scutellum black. Elytra more than 3 times as long as prothorax, and wider, with more or less geminate punctures when they are not in single lines separated by costae. Hind tibiae rather short for so long a body, and with green lustre.

Holotype.—Male, USNM Type No. 75747. One paratype.

Type-locality. — Corumbá, Mato Grosso, Brazil.

Remarks.—The unusually small head and interocular space are noticeable for

so large a beetle. The aedeagus has a long narrow tip.

Colaspis ekraspedona, n. sp.

(Fig. 5)

Length 7.5 mm. Width 3.5 mm.

Oblong oval, shining black, antennae and legs black.

Head with interocular space more than half width of head, densely and finely punctate. Antennae all black. Prothorax with margin with tooth, disc very densely punctate. Elytra not 3 times as long as prothorax and somewhat wider, densely punctate, punctures in geminate rows except near suture, with costae near punctures. Body beneath with dense punctures on prosternum, dark brown, legs dark brown.

Holotype.—Male, USNM type No. 75748.

Type-locality.—Lombory, Minas Gerais, Brazil, collected by J. Halix in November.

Remarks.—The aedeagus of this species has an unusually broad tip and as a whole is longer than usual. The beetle itself is densely punctate.

Colaspis lampomela, n. sp.

(Fig. 6)

Length 7 mm. Width. 3.5 mm.

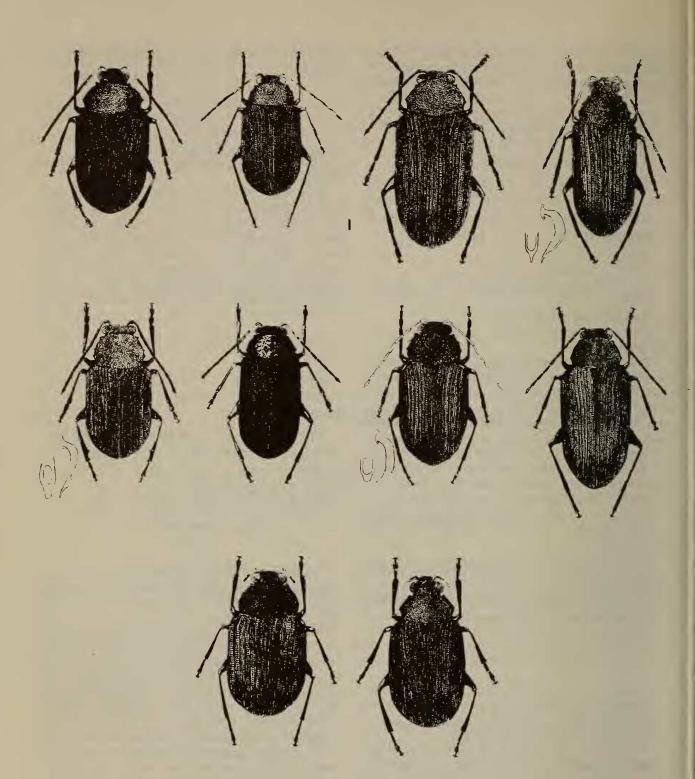
Elongate oblong oval, shining black with mostly black antennae, black legs, ventral surface very dark green.

Head with interocular space more than half width of head, finely and densely punctate, antennae with only joint 2 entirely pale, joints 1, 3, 5, and 6 partly pale, remainder black. Prothorax twice as wide as long, margin with tooth below middle, disc sparsely punctate with median elevations about punctures. Scutellum shining black. Elytra more than 3 times as long as prothorax and a little wider, densely punctate with geminate punctures except near suture and near apex, with costae between. Prosternum rather sparsely punctate. Ventral surface greenish black. Legs dark brown, nearly black.

Holotype.—Female, USNM Type No. 75749.

Type-locality.—Corotuba, Brazil. Collected Feb. 19, 1947. From Monros collection.

Remarks.—Unfortunately the only specimen is a female. However, this species differs from all the others described here in having few punctures on the prothorax.



Figs. 1-10 (left to right, top to bottom), species of *Colaspis*. Fig. 1, *Colaspis quattuordecimcostata* Lefèvre; fig. 2, *C. paracostata* Blake, n. sp.; fig. 3, *C. braxatibiae* Blake, n. sp.; fig. 4, *C. corumbensis* Blake, n. sp.; fig. 5, *C. ekraspedona* Blake, n. sp.; fig. 6, *C. lampomela* Blake, n. sp.; fig. 7, *C. flavantenna* Blake, n. sp.; fig. 8, *C. purpurala* Blake, n. sp.; fig. 9, *C. manausa* Blake, n. sp.; fig. 10, *C. juxaoculus* Blake, n. sp.

Colaspis flavantenna, n. sp.

(Fig. 7)

Length 10.5 mm. Width 5.0 mm.

Elongate oblong oval, dark brown, almost black, shining with a green lustre. Scutellum shining margins, legs dark brown, antennae pale.

Head with interocular space half width of head, densely punctate, antennae all pale. Prothorax twice as wide as long with margin having tooth below middle, disc rather irregularly punctate, shining with a green lustre. Scutellum shining with a dark green lustre. Elytra a little more than 3 times as long as prothorax and somewhat wider, punctures mostly in geminate rows except near suture and apex, where they occur in single or sometimes alternate rows, costae between very conspicuous. Body beneath shining dark bluegreen, prosternum punctate. Legs with femora dark above and all dark near tip, tibiae all dark. Aedeagus long and broad with tip very broad, and widening somewhat behind tip.

Holotype.—Male, USNM Type No. 75751. One female paratype.

Type-locality.—not given (from Bow-ditch collection).

Remarks.—This species is very like *C. quattuordecimcostata* but larger, with a larger head and longer hind tibiae. No locality is given, but the fact that it resembles so many of the group leads me to believe that it, too, may have been collected in Brazil. It is the only one of the group with yellow antennae, which distinguishes it from the rest of the species. In addition, the aedeagus has an unusually broad tip.

Colaspis purpurala, n. sp. (Fig. 8)

Length 9 mm. Width 4.5 mm.

Very elongate oblong oval, black, elytra with a rosy lustre and sides with a green lustre, antennae all black.

Head with interocular space half width of head, a median depression down front, finely and densely punctate, antennae all black. Prothorax approximately twice as wide as long, margin with tooth below middle, disc densely punctate. Scutellum black. Elytra nearly 4 times as long as prothorax with geminate punctation becoming alternate and then in single row below middle, costae prominent. Body beneath blue green. Prosternum with few punctures. Legs long and black.

Holotype.—Female, USNM Type No. 75752.

Type-locality.—Not given. (from Bowditch collection).

Remarks.—A member of the *quattuordecimcostata* group with unusually long elytra. It resembles *C. brachytibiae*, except that the legs are much longer. The specimen on the pin bears the name "*purpurala*," a name I cannot find in any catalogue.

Colaspis manausa, n. sp. (Fig. 9)

Length 10.5 mm. Width 5.7 mm. Elongate oblong oval, black shining with a green lustre in the light, undersurface dark green, antennae with first 2 joints and up to the tip of third joint pale, joint 4 all dark, remainder missing.

Head densely and finely punctate, a median depression down front, interocular space less than half width of head, labrum dark. Prothorax nearly twice as wide as long, margin with prominent tooth below middle, disc irregularly punctate with many bare spaces. Scutellum shining black. Elytra not 3 times as long as prothorax and wider, with punctures somewhat irregular but tending to be geminate, becoming single near suture and apex, costae between prominent. Body beneath dark green, prosternum with deep punctures. Femora near body dark green, becoming dark brown before end, tibiae dark brown, almost black.

Holotype.—Female, USNM Type No. 75753.

Type locality. — Manaus, Brazil.

Remarks. — This species appears black except in bright light, where it has a green lustre all over body. The interocular space is less than half the width of the head, in this feature resembling *C. corombensis* which is unusual in this group. It is also like *C. flavantenna* except that the antennae are not completely pale.

Colaspis juxaoculus, n. sp. (Fig. 10)

Length 11 mm. Width 4.6 mm. Elongate oblong oval, shining black.

Head with interocular space half width of head, densely punctate, antennae with first joint dark from above, joints 2 and 3 pale, remainder missing. Prothorax twice as wide as long with margin having a tooth below middle, disc densely punctate. Scutellum shining black. Elytra more than 3 times as long as prothorax and wider, with geminate punctures except near suture and apex of next row, where punctures are in single line. Legs and ventral surface black, mesosternum without punctures.

Holotype.—Female, USNM Type No. 75754.

Type locality.—Brazil.

Remarks.—This beetle bears the label "Colaspis 14-costata Lefèvre," and it is very close to Lefèvre's species, with the difference that the hind tibiae of C. quattuordecimcostata are very short and the hind tibiae of C. juxaoculus are much longer than those of the former.